

1/7

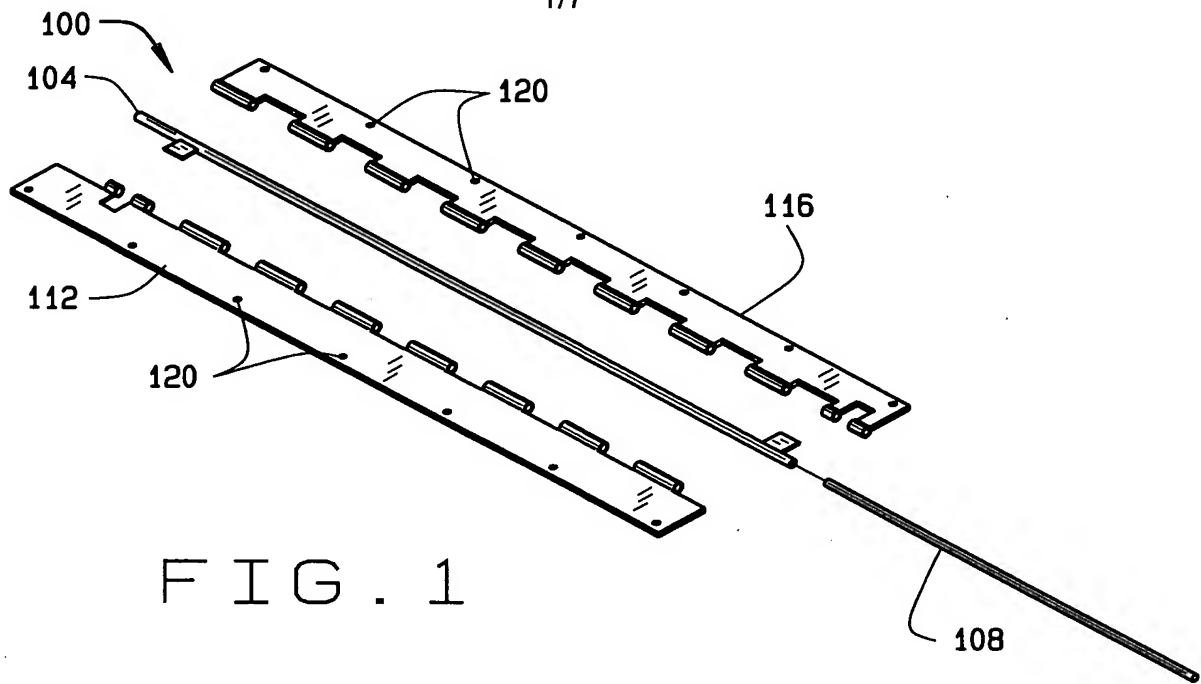


FIG. 1

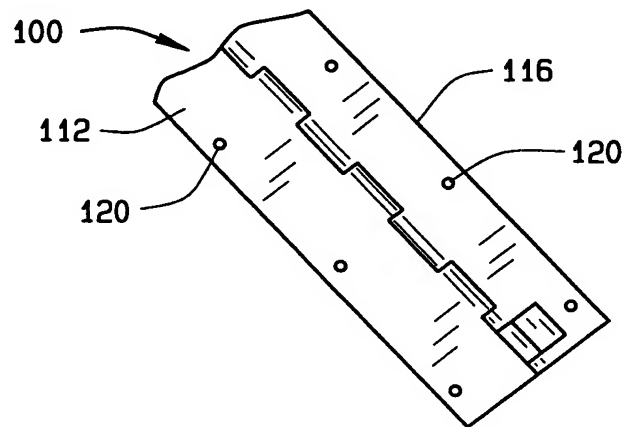


FIG. 2

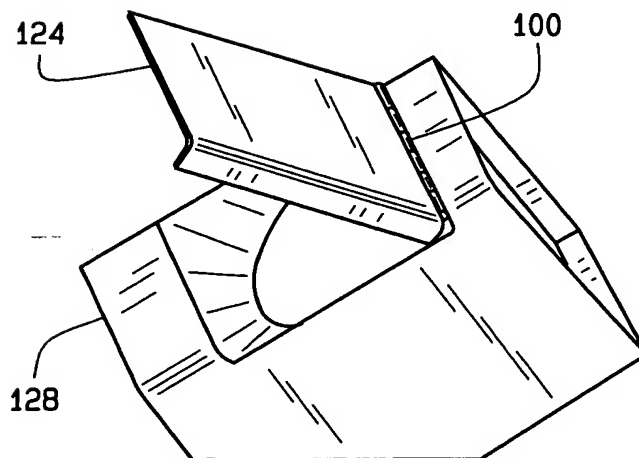
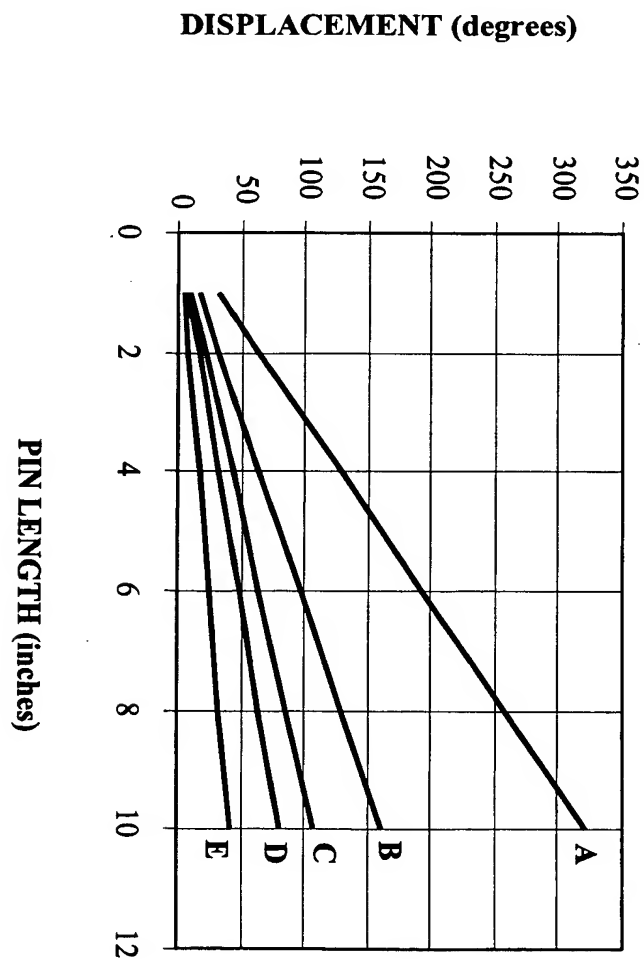


FIG. 3



**FIG. 4**

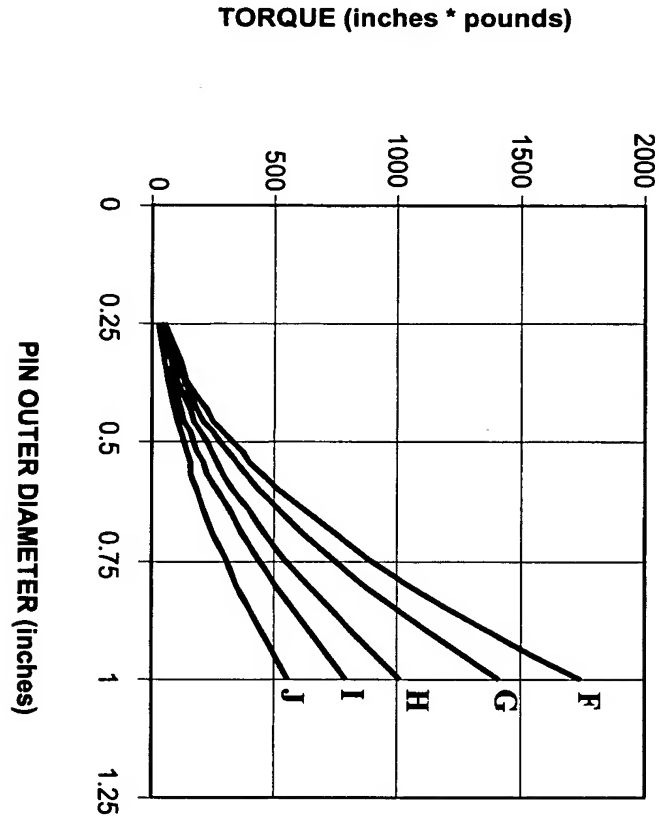
Title: HINGE APPARATUS WITH TWO-WAY CONTROLLABLE SHAPE MEMORY  
ALLOY (SMA) HINGE PIN ACTUATOR AND METHODS OF MAKING TWO-WAY SMA PARTS

Inventor: James H. Mabe

Atty. Ref.: 7784-000704

Attorney Anthony G. Fussner (314) 726-7500

3/7



**FIG. 5**

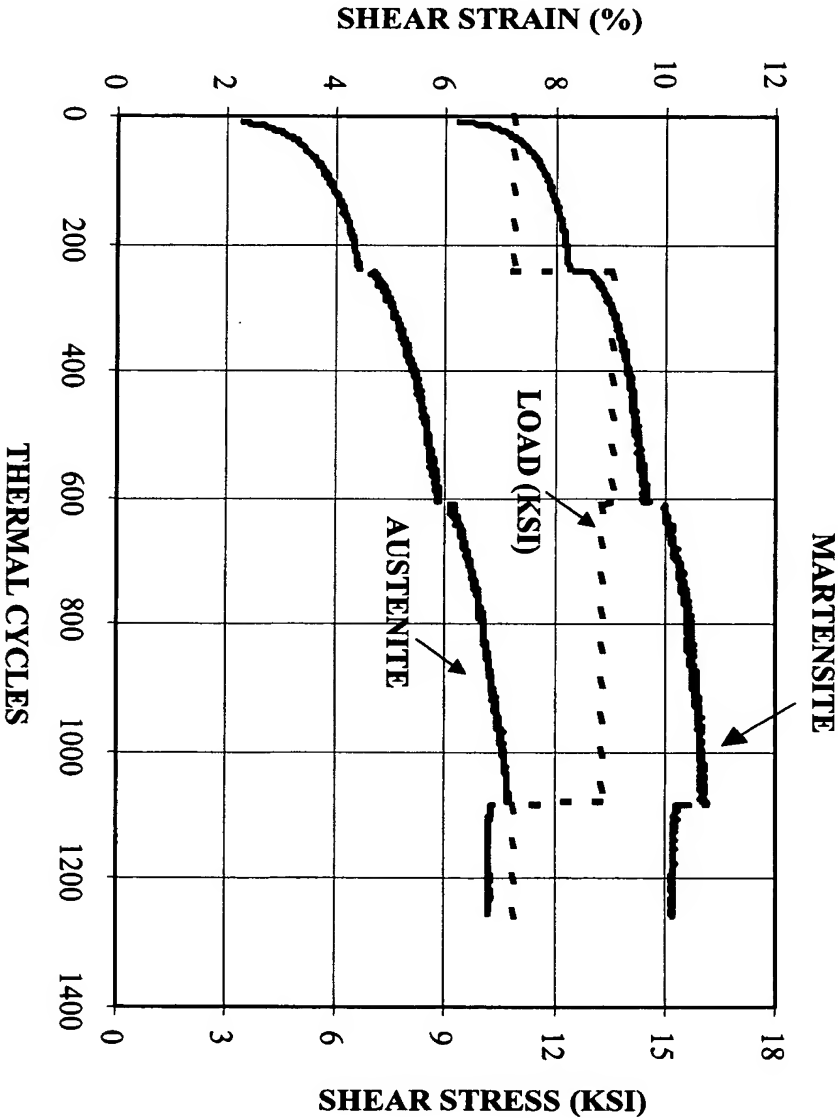
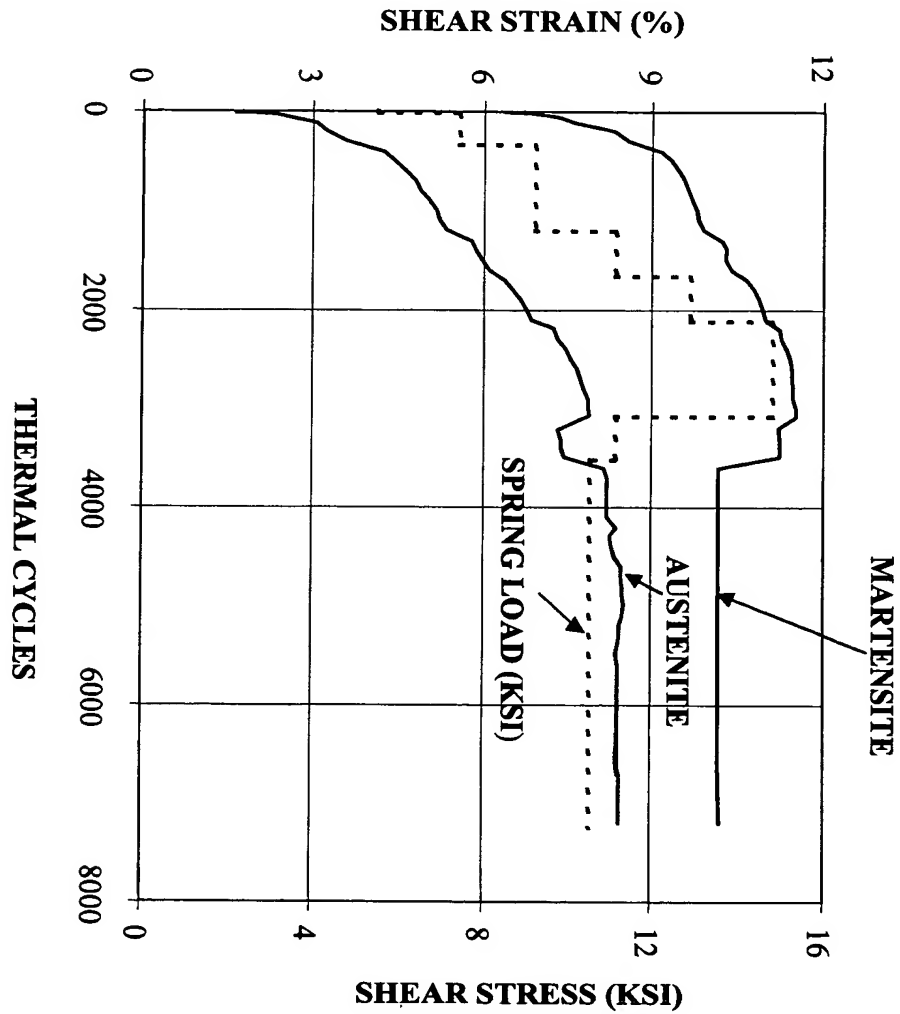
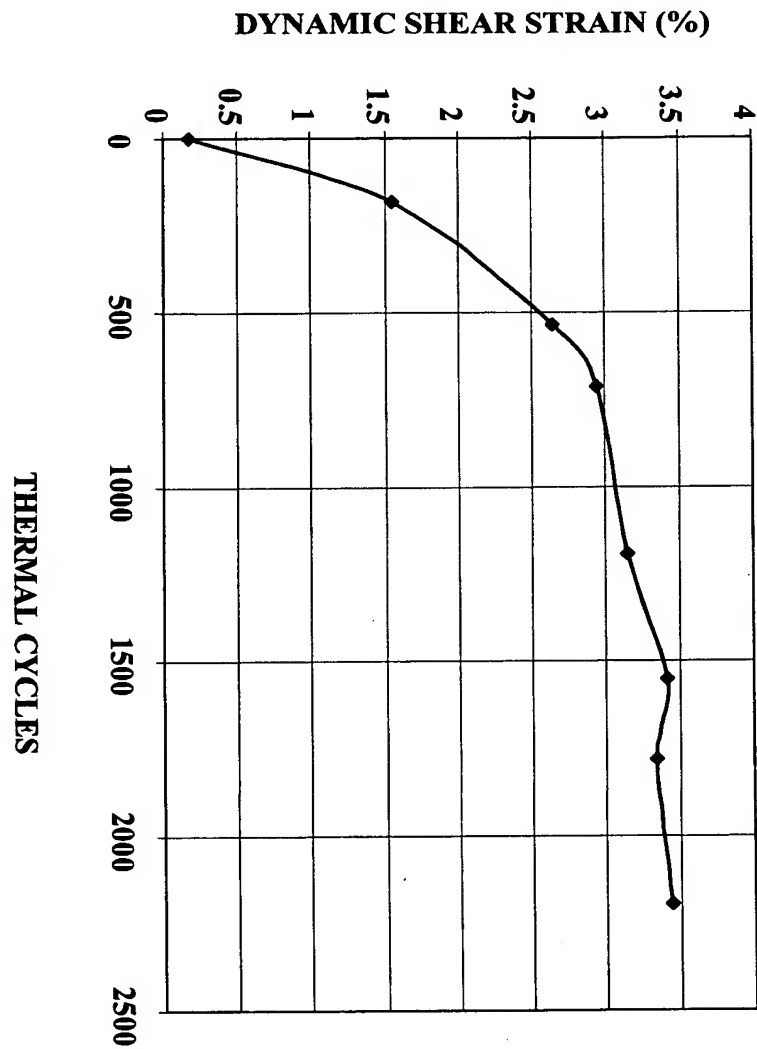


FIG. 6



**FIG. 7**



**FIG. 8**

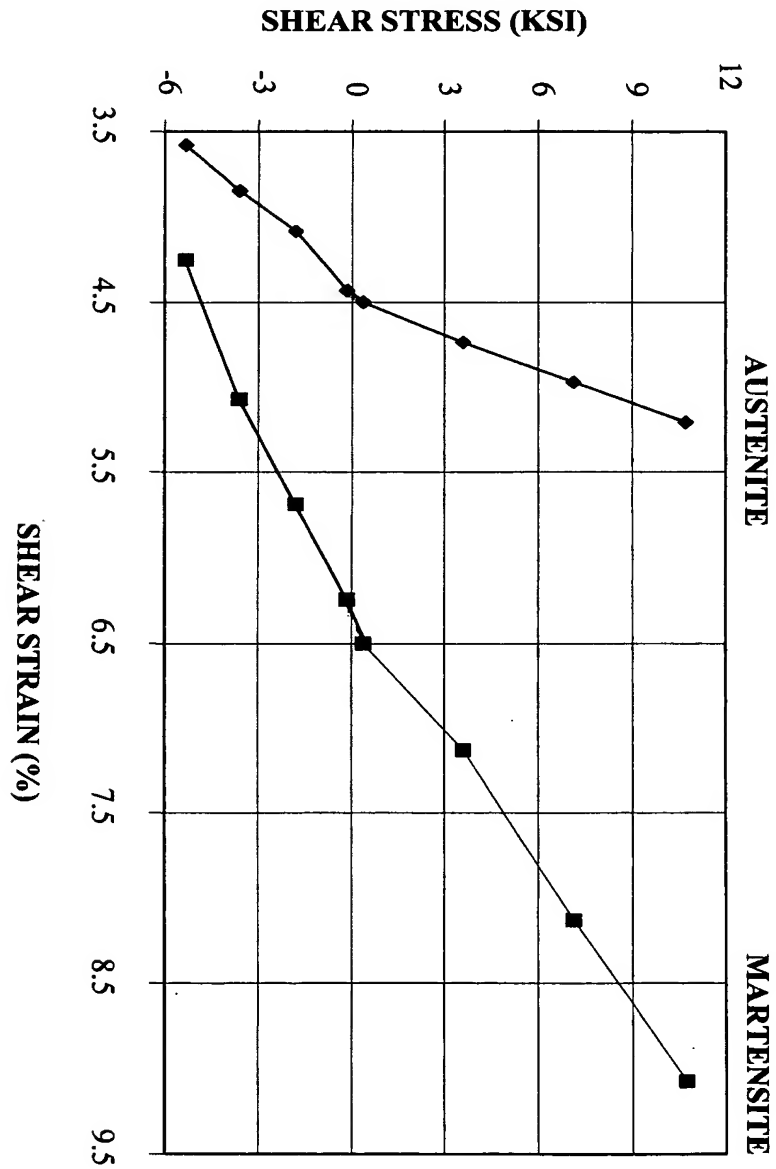


FIG. 9